

WHAT IS CLAIMED IS:

1. A method for correlating tracking data, associated with an activity occurring in a three-dimensional space, with images captured within the space, wherein remotely-accessible identification tags attached to people and/or objects associated with the activity are linked to one or more databases that uniquely identify characteristics of the people and/or objects, said method comprising the steps of:

- (a) locating a camera with respect to the three-dimensional space, wherein the camera at a given location has a determinable orientation and field of view that encompasses at least a portion of the space;
- (b) capturing a plurality of images with the camera and storing data corresponding to the images, including a capture time for each image;
- (c) capturing tracking data from the identification tags attached to the people and/or objects within the space and storing the tracking data, including a tag capture time for each time that a tag is remotely accessed;
- (d) correlating each image and the tracking data by interrelating tracking data having a tag capture time in substantial correspondence with the capture time of each image, thereby generating track data corresponding to each image;
- (e) utilizing the track data to determine positions of the people and/or objects within the three dimensional space at the capture time of each image; and
- (f) utilizing the location and orientation of the camera to determine the portion of the space captured in each image and thereby reduce the track data to a track data subset corresponding to people and/or objects positioned within the portion of space captured in each image.

2. The method as claimed in claim 1 further comprising the steps of:

- (g) selecting an image from the plurality of images; and

(h) utilizing the track data subset to identify characteristics of the people and/or objects positioned within the portion of space captured in the selected image.

3. The method as claimed in claim 1 further comprising the steps of:

(g) selecting a participant and/or object ID associated with a particular identification tag attached to a particular person and/or object; and

(h) utilizing the track data subset corresponding to people and/or objects within each image to identify one or more images in which the person and/or object appears.

4. The method as claimed in claim 1 wherein remotely-accessible identification tags are placed on the camera or on apparatus supporting the camera and the tracking data captured in step (c) includes tracking data from the tags on the camera or on apparatus supporting the camera and the location and orientation of the camera is determined from the tracking data.

5. The method as claimed in claim 1 wherein the camera has a field of view that is oriented along a predetermined line of sight, and wherein the orientation is determined from the line of sight.

6. The method as claimed in claim 1 wherein the three-dimensional space includes activities occurring in a plurality of physically-limited locations within the space and information regarding these physically-limited locations is included in the tracking data captured in step (c) and utilized in step (g) to further reduce the track data to a track data subset corresponding to people and/or objects positioned within a physically-limited location within the portion of space captured in each image.

7. The method as claimed in claim 6 wherein the activity is a game or like gathering that is played on a playing field in a sports facility, and the

physically-limited location is at least one of a particular sports facility, a particular playing field as defined by its boundaries, or a particular defined area within a particular playing field.

8. The method as claimed in claim 1 wherein an optical limitation is utilized in step (g) to further reduce the track data to a track data subset corresponding to people and/or objects positioned within an optically-limited volume within the portion of space captured in each image.

9. The method as claimed in claim 8 wherein the optical limitation is a depth of field limitation of the camera, wherein the track data subset corresponds to people and/or objects positioned within both the portion of space captured in each image and the optically-limited volume defined by the depth of field limitation.

10. The method as claimed in claim 1 wherein one or more inclusions are utilized in step (g) to further reduce the track data to a track data subset corresponding to an included subset of people and/or objects positioned within the portion of space captured in each image.

11. The method as claimed in claim 9 wherein one or more inclusions are utilized in step (g) to include track data in the track data subset corresponding to certain included people and/or objects positioned within the portion of space captured in each image but that are nonetheless outside the depth of field limitation.

12. The method as claimed in claim 1 wherein one or more exclusions are utilized in step (g) to further reduce the track data to a track data subset that excludes certain people and/or objects that are nonetheless positioned within the portion of space captured in each image.

13. The method as claimed in claim 1 wherein the activity is a game or like kind of competitive gathering played out on a three-dimensional space comprising a bounded field and the tracking data includes identifiers for one or more participants appearing in an image and wherein step (g) further comprises correlating the images and the tracking data to identify one or more of the participants appearing in the images.

14. The method as claimed in claim 13 further comprising the step (h) of utilizing the track data subset to link to one or more databases containing biographical details of the participants positioned within the portion of space captured in each image.

15. The method as claimed in claim 1 wherein the camera is a digital camera.

16. The method as claimed in claim 1 wherein the camera is a film camera.

17. A system for correlating tracking data, associated with an activity occurring in a three-dimensional space, with images captured within the space, wherein remotely-accessible identification tags attached to people and/or objects associated with the activity are linked to one or more databases that uniquely identify characteristics of the people and/or objects, said system comprising:

an imaging system including one or more cameras located at given locations with respect to the three-dimensional space, wherein each camera has a determinable orientation and field of view that encompasses at least a portion of the space, thereby enabling the imaging system to capture a plurality of images of the portion of the space and store data corresponding to the images, including a capture time for each image;

a tracking system for capturing tracking data from the identification tags attached to the people and/or objects within the space and

storing the tracking data, including a tag capture time for each time that a tag is remotely accessed; and

a correlation and data reduction stage for (1) correlating the selected image and the tracking data by interrelating tracking data having a tag capture time in substantial correspondence with the capture time of the selected image, thereby generating track data corresponding to the selected image; (2) utilizing the track data to determine positions of the people and/or objects within the three dimensional space at the capture time of the selected image; and (3) utilizing the location and orientation of the camera to determine the portion of the space captured in the selected image and thereby reduce the track data to a track data subset corresponding to people and/or objects positioned within the portion of space captured in the selected image.

18. The system as claimed in claim 17 further comprising an output stage for utilizing the track data subset to identify characteristics of the people and/or objects positioned within the portion of space captured in the selected image.

19. The system as claimed in claim 17 wherein remotely-accessible identification tags are placed on the camera or on apparatus supporting the camera and the tracking system processes tracking data from the tags on the camera or on apparatus supporting the camera in order to determine the location and orientation of the camera.

20. The system as claimed in claim 17 wherein the remotely accessible identification tags are radio frequency identification tags.

21. The system as claimed in claim 17 wherein the activity is a game or like kind of competitive gathering played out on a three-dimensional space comprising a bounded field and the tracking data includes identifiers for one or more participants appearing in an image, and wherein the correlation and

data reduction stage further correlates the images and the tracking data to identify one or more of the participants appearing in the images.

22. The system as claimed in claim 21 further comprising one or more databases containing biographical details of the participants, wherein data identifying one or more of the participants appearing in the images is used to link to the databases to retrieve biographical details concerning the participants.

23. The system as claimed in claim 17 wherein the camera is a digital camera.

24. The system as claimed in claim 17 wherein the camera is a film camera.